



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,329	10/27/2000	James E. Moon	14917.1.1	8664

7590 09/18/2002

David O. Seeley
WORKMAN, NYDEGGER & SEELEY
1000 Eagle Gate Tower
60 East South Temple
Salt Lake City, UT 84111

EXAMINER

SODERQUIST, ARLEN

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 09/18/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/698,329

Applicant(s)
Moon et al.

Examiner
Arlen Soderquist

Art Unit
1743



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

Notice of References Cited (PTO-892)

Notice of Draftsperson's Patent Drawing Review (PTO-948)

Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5-9

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 10 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Karger (WO 97/04297). In the published application Karger teaches a microscale fluid handling system (10) including a substrate (11) with one or more channels (12) integrally formed in it. The channels terminate in one or more exit ports (16) which transfer a microscale quantity of a fluid sample traveling in the channels from the substrate to an external analytical and or collection system (23). The exit port or ports may be configured, for example, as an electrospray interface for transfer of a fluid sample to a mass spectrometer. The channels extend to one or more planes in the substrate, and the substrate has multiple channels within a single plane. The substrate has multiple planes and is an optical grade material such as silica. One or more of the exit ports can lie in a plane different from a plane through one or more of the channels. The device permits efficient transfer of nanolitre quantities or other small quantities of fluid sample from spatially concentrated environment of microscale device, such as microfabricated chip, to off chip analytical or collection devices without increase in sample volume. Page 3 line 21 to page 4 line 15 teaches that samples can be introduced into a channel on the microscale device by a variety of methods, such as pressure, electrokinetic injection, or other technique. Migration of the sample within a channel may be produced by an electrical current and/or pressure drop applied to cause the sample components to migrate along the channel. The channels may function only for fluid transfer to a mass spectrometer or a collection device, or the channels can serve as environments for various types of sample manipulations such as capillary electrophoresis (CE) or polymerase chain reaction (PCR), or for carrying out any type of sample chemistry. The channels may be filled with membrane or packing material to effectuate preconcentration or enrichment of samples or for other treatment steps. Packing material may be bound to the walls of the channels or may include other components, such as magnetic particles, so that when a magnetic field is applied, the magnetic particles retain the packing material in place. A micromachined filter or other stationary structure may also be employed to hold packing material in place. Alternatively, stationary structures can be micromachined, cast or otherwise formed in the surface of a channel to provide

a high surface area which can substitute for packing material. Another method of applying samples is to attach a miniaturized multiple-sample holder as a hybrid micromachined system to the entrance ports of the channels. Page 7 line 8-19 teach that buffer reservoirs, reaction chambers, sample reservoirs, and detection cells may also be fabricated along with each individual channel. More complex structures can be created by stacking or otherwise assembling two or more microfabricated devices. In addition, individual instrument blocks (devices) such as sample reservoirs, pretreatment or separation channels, and exit ports can be micromachined separately and combined into one complete system in much the same way as hybrid integrated circuits in electronics are formed. In figure 1a, element 20 shows a recess around the exit port while figures 2b-2d show other configurations for the exit ports. The recess is used to isolate the exit ports and reduce cross-contamination between the channels. Figure 1c shows a design in which two parts are connected together and the electrodes are prior to the channels in the substrate. In this embodiment the inlet orifice and the ejection surface are located on opposed planar surfaces of the microchip body (11). Figure 3 shows a radial design. Page 14 lines 15-16 teach that the exit ports may be formed with electrodes to allow active control of their potential. Figures 2(b) and 2(c) show the formation of an ESI tip as the exit port. Page 4, lines 7-13 teach forming structures in the channels to provide a high surface area for packing material.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-14 of U.S. Patent No. 6,245,227. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claim totally encompasses the patented claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited art is related to electrospray devices, ~~and includes the US~~
~~equivalent to the applied Karger reference.~~

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose telephone number is (703) 308-3989. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

For communication by fax to the organization where this application or proceeding is assigned, (703) 305-7719 may be used for official, unofficial or draft papers. When using this number a call to alert the examiner would be appreciated. Numbers for faxing official papers are 703-872-9310 (before finals), 703-872-9311 (after-final), 703-305-7718, 703-305-5408 and 703-305-5433. The above fax numbers will generally allow the papers to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


September 16, 2002

ARLEN SODERQUIST
PRIMARY EXAMINER